

CLAIMS

What is claimed is:

1. A filtering apparatus of a hard disk drive having a housing, a base plate, and a cover plate, comprising:

    a filter, having end portions, filtering particles from air flowing inside the housing which includes the base plate and the cover plate; and

    two holders installed inside the housing and having support grooves supporting both of the end portions of the filter,

    wherein the filter comprises:

        a filtering portion through which the flowing air passes and particles are filtered from the flowing air; and

        an insertion portion included at both of the end portions of the filtering portion and inserted into the support grooves forming a seal.

2. The apparatus as claimed in claim 1, wherein the insertion portion is formed by extending a material forming the filtering portion a predetermined length from both end portions of the filtering portion to have a thickness narrower than that of the filtering portion.

3. The apparatus as claimed in claim 1, wherein the insertion portion is made of a material different from that of the filtering portion and coupled to both end portions of the filtering portion.

4. The apparatus as claimed in claim 2, wherein a length of the filtering portion is substantially the same as an interval between two holders.

5. The apparatus as claimed in claim 2, wherein a thickness of the insertion portion and a width of the support groove are substantially the same to prevent a gap generating between the insertion portion and the support grooves.

6. The apparatus as claimed in claim 5, wherein a length of the insertion portion and a depth of the support grooves are substantially the same.

7. The apparatus as claimed in claim 3, wherein the insertion portion is made of a material having a predetermined strength through which air cannot pass.

8. The apparatus as claimed in claim 1, wherein the filtering apparatus is installed on a cover plate of the housing.

9. The apparatus as claimed in claim 3, wherein a length of the filtering portion is substantially the same as an interval between two holders.

10. The apparatus as claimed in claim 3, wherein a thickness of the insertion portion and a width of the support groove are substantially the same to prevent a gap generating between the insertion portion and the support grooves.

11. A filtering apparatus of a hard disk drive including a base plate and a cover plate, comprising:

a filter installed on the cover plate, including a filtering material having first and second ends;

a pair of insertion portions longitudinally extending from the ends of the filter; and

a pair of holders abutting the base plate and cover plate and the ends of the filter, including support grooves depressed into surfaces of the holders and integrally surrounding the insertion portions.

12. The apparatus according to claim 11, wherein the insertion portions extend a predetermined length from both ends of the filter.

13. The apparatus according to claim 12, wherein the insertion portions have a thickness narrower than that of the filter.

14. The apparatus according to claim 13, wherein a length of the filter is substantially the same as an interval between two holders.

15. The apparatus according to claim 13, wherein a thickness of the insertion portion and a width of the support grooves are substantially the same.

16. The apparatus according to claim 15, wherein a length of the insertion portion and a depth of the support grooves are substantially the same.

17. The apparatus according to claim 11, wherein the insertion portion and the filter are made of different materials.

18. The apparatus according to claim 17, wherein the insertion portion is coupled to both end portions of the filter.

19. The apparatus according to claim 18, wherein a length of the filter is substantially the same as an interval between the holders.

20. The apparatus according to claim 17, wherein a thickness of the insertion portion and a width of the support grooves are substantially the same.

21. The apparatus according to claim 20, wherein a length of the insertion portion and a depth of the support grooves are substantially the same.

22. The apparatus according to claim 17, wherein the insertion portion is made of a material having a predetermined strength through which air cannot pass.